REMARKS

This paper is filed in response to the office action mailed on May 3, 2005. Claims 1-8 stand rejected; claims 1 and 2 have been amended; claims 1-8 remain pending.

Claims 1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hong (US 5,903,040) in view of Kirchhoff (US 6,673,693). In addition, Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hong (US 5,903,040) in view of Kirchhoff (US 6,673,693) and further in view of Basous et al (US 5,501,787).

In response, Applicant has amended claim 1 to traverse this rejection. Specifically, claim 1 now recites the formation of a plurality of vertically oriented pores that are formed in shape of a trench. No combination of the prior art teaches or suggests this concept and therefore no *prima facie* case of obviousness has been established under MPEP §2142 which requires:

> "[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally availableto one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimedcombination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. "

Citing, In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *see also* MPEP § 2143- § 2143.03 for decisions pertinent to each of these criteria.

Hong is cited for the proposition that it teaches trench isolation. Hong is silent, however, on the concept of forming pores in a silicon substrate. Kirchoff and Bassous are cited for the proposition that they teach the formation of porous silicon by etching the silicon with HF (Kirchoff) or by using an electrochemical cell (Bassous). However, neither reference relied upon for the teaching of a porous silicon, Kirchoff or Bassous teach or suffest the formation of vertical pores in the substrate and therefore the following remarks will focus on Kirchoff and Bassous.

Kirchoff does not teach or suggest vertically oriented pores in a silicon substrate or any means to form vertically oriented pores as shown in FIG. 4 of the present application. Kirchoff's porous oxide 7 is clearly unoriented.

Bassous also teaches nothing about the formation of vertically oriented pores in silicon or a silicon substrate.

In addition, the porous silicon including a plurality of pores is formed by an electrochemical etch process using an electrolyte and ultraviolet rays as recited in amended claim 2. The ultraviolet rays are used to create holes on a silicon surface. Creating of the vertical holes or pores in the silicon surface is an important step to induce a dissociation procedure of silicon as set forth in the detailed description section of the present application. In contrast, neither Kirchoff nor Bassous teaches the generation of porous silicon using ultraviolet rays to create vertical holes in the silicon surface. Thus claims 2 though 7 are clearly allowable over any hypothetical combination of Hong, Kirchoff and Basous for this additional reason.

Therefore, Applicant believes that the amended claims 1 and 2 as well as dependent claims 3-8 are all patentable over the cited references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 13-2855, under Order No. 29936/39432.

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Respectfully submitted,

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